

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of ) MAIL STOP AMENDMENT  
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Application No.: 10/622,478 ) Group Art Unit: 1616  
Filed: July 21, 2003 ) Examiner: Kristie Latrice Brooks  
For: GONIOCHROMATIC/LIGHT ) Confirmation No.: 4522  
REFLECTIVE COSMETIC MAKEUP )  
COMPOSITIONS )  
)

**ANNEX TO REPLY AND AMENDMENT**

The following data demonstrate the cosmetic benefit of compositions according to the present invention, i.e. comprising specific reflective particles according to the invention, *versus* compositions not comprising such specific reflective particles according to the invention.

**1. Materials and methods**

**a. Materials**

- The following reflective particles have been used:

REFLECTIVE PARTICLES USED ACCORDING TO THE PRESENT INVENTION	TRADEMARK NAME	CHEMICAL NAME	AVERAGE SIZE ( $\mu\text{m}$ )	PROVIDER
	Metashine® MC 1080 RY	Particles of glass (C-glass) coated with titanium oxide	80	NIPPON SHEET GLASS
	Prominence® SF	Particles of synthetic mica (fluorophlogopite) coated with titanium oxide	80	TOPY
	Metashine® ME 2040 PS	Particles of glass (C-glass) coated with silver	40	NIPPON SHEET GLASS

OTHER PARTICLES	Reflecks Dimensions Sparkling Blackened Gold®	Flakes of glass coated with iron oxide	80	ENGELHARD (BASF)
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- The following goniochromatic coloring agent has been used:

TRADEMARK NAME	CHEMICAL NAME	PROVIDER
Scopearl Fantastico® Rose X	Interferential dye aluminum/silica/brown iron oxide	BASF

- The following gloss base has been used:

NAME	CONCENTRATION
4-HYDROXYTOLUENE DITERTIOBUTYL	0.056
VEGETAL ISOSTEARIC AND ADIPIC FATTY ACID ESTERS GLYCERYL	19.976
DI-ISO-STEARYL MALATE	10.84
PENTAERYTHRITYL TETRA-ISO-STEARATE	15.2
TRI-DECYL TRI-MELLITATE	11.523
2-DECYL TETRADECANOIC ACID TRIGLYCERIDE (GUERBET C24)	21.896
MIXTURE OF ISO-PROPYL, ISO-BUTYL, N- BUTYL P-HYDROXYBENZOATES (40/30/30)	0.504
POLYBUTENE (MONOOLEFINS / ISOPARAFFINS) (PM:620)	12
HYDROPHOBIC PYROGENATED SILICE (SURFACE-TREATED BY DIMETHYLSILANE)	8
<b>Total</b>	<b>100</b>

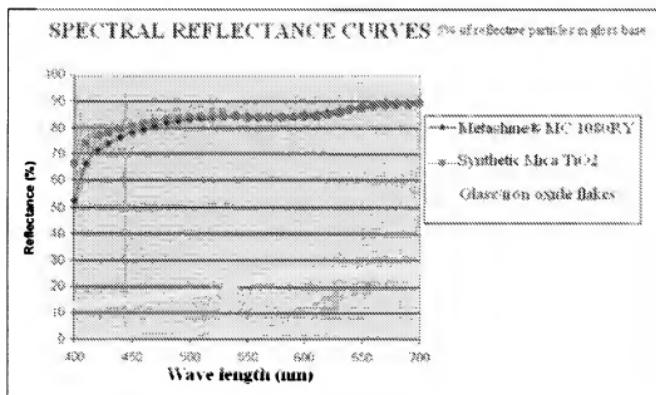
**b. Methods**

- Evaluation of spectral reflectance

Dispersions comprising respectively 5% by weight of some previously mentioned reflective particles in the previous gloss base, have been made and tested. Such dispersions have been spread onto a colorimetric space (or contrast card) with an automatic spreading machine in order to obtain a layer of 300  $\mu\text{m}$  thickness.

Spectral reflectance has been evaluated on said layers using a spectrophotometer Minolta® 3700d (in "specular component included" mode), on the white background of the contrast card.

The obtained results concerning dispersions comprising respectively particles of "glass + TiO<sub>2</sub>", "synthetic mica + TiO<sub>2</sub>" and "glass + iron oxide" are depicted in the following curves (Figure 1) and summed up in table 1 hereunder.



**Figure 1**

Particles	Average reflectance
Metashine® MC 1080RY	82.3
Synthetic Mica/titanium oxide	83.6
Glass/iron oxide flakes	21

**Table 1**

These results show that the reflective particles according to the present invention (i.e. particles "glass/TiO<sub>2</sub>" and "synthetic mica/TiO<sub>2</sub>"), when present in a gloss base according to the invention, exhibit an average reflectance of more than 70% as prescribed according to the present invention, whereas glass/iron oxide flakes, when present in the same gloss base, exhibit an average reflectance of much less than 70%.

Consequently, both type of particles have not the same behavior in the gloss base according to the present invention, and thus exhibit different physical properties.

- Evaluation of the difference in hue angle (Dh) of the goniochromatic coloring agent used according to the present invention

A dispersion of 5% by weight of the goniochromatic coloring agent Scipearl® fantastico rose X in the previously described gloss base, has been made.

Such dispersion has then been spread onto a contrast card with an automatic spreading machine in order to obtain a layer of 300 µm thickness.

The color trajectory of the goniochromatic coloring agent has been measured using an instrument system of reference BYK-mac (BYK Gardner®).

The lighting is at 45° and colorimetric measures are made for detection angles (i.e. angle of observation) of 65°, 30°, 0°, -20°, -30° and -60°, respectively.

The following drawing illustrates this assay.

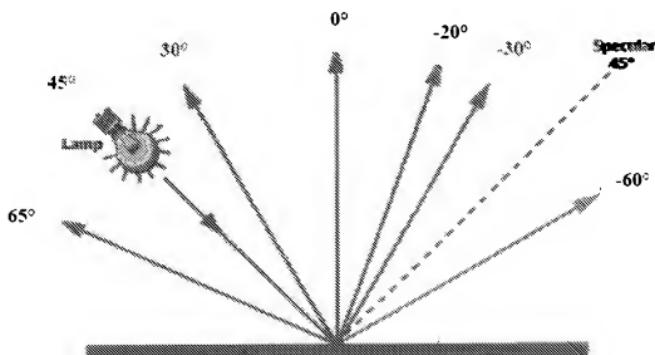


Table 2 (hereunder) exhibits the measures that have been obtained.

	L°	a°	b°	C°	h°
45°/65°	27.24	15.85	14.95	21.79	43.32
45°/30°	34.06	18.71	11.74	22.09	32.11
45°/0°	47.21	28.55	8.79	29.87	17.11
45°/-20°	73.81	37.61	20.82	42.99	28.97
45°/-30°	91.27	35.87	35.73	50.63	44.89
45°/-60°	103.88	7.32	73.71	74.07	84.33

Table 2

Consequently, the average variation Dh of the hue angle h is of about 67.22° when the angle of observation relative to the normal is varied between 0° and 60°, for an incident light angle of 45°.

Consequently, the measurements of the color trajectory of the goniochromatic agent, when present in the cosmetic base according to the present invention, spread onto the a\*b\* plane of the colorimetric space, corresponds to the one disclosed in the present application.

- Comparative evaluation of the volumizing effect of gloss compositions

Gloss formulations comprising 3% by weight of reflective particles according to the present invention (compositions 2, 3 and 4, respectively comprising particles of "glass + TiO<sub>2</sub>", "synthetic mica + TiO<sub>2</sub>" and "glass + Ag") have been compared to a composition comprising 3% by weight of glass/iron oxide flakes (composition 1), when applied onto the lips.

Each composition comprises 5% by weight of the same goniochromatic agent, and thus only differs from each other by the type of reflective particles, that they comprise.

The following pictures clearly illustrate the difference of volumizing effect imparted by each composition.

**Picture 1**  
Naked lips



**Picture 2**  
Composition 1 comprising flakes of glass coated with iron oxide



**Picture 3**

Composition 2 comprising particles of glass coated with titanium oxide



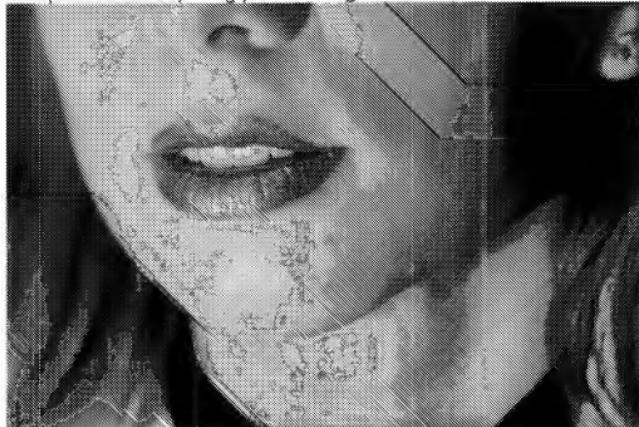
**Picture 4**

Composition 3 comprising particles of synthetic mica coated with titanium oxide



**Picture 5**

Composition 4 comprising particles of glass coated with silver



Pictures 3, 4 and 5 clearly show that compositions 2, 3 and 4 respectively comprising reflective particles according to the present invention (i.e. particles of glass coated with titanium oxide, particles of synthetic mica coated with titanium oxide and particles of glass coated with silver) impart an improved volumizing effect to the lips, compared to naked lips (picture 1) and to lips with composition 1 comprising other particles (i.e. flakes of glass coated with iron oxide, see picture 2).

More particularly, reflective particles according to the present invention (compositions 2, 3 and 4) allow emphasizing the dark/light contrast and the color trajectory of goniochromatic coloring agent, due to their sparkling and bright appearance.

Furthermore, they create highlight points that are visible to the naked eye, thus creating/reinforcing the volumizing effect.

To conclude, it is clear from these pictures that compositions according to the present invention, comprising specific reflective particles, impart an improved volumizing effect, compared to composition comprising particles, which are different from those selected according to the present invention.



PICTURE 1 : Naked lips

PICTURE 2 : Composition 1 comprising flakes of glass coated with iron oxide



PICTURE 3 : Composition 2 comprising particles of glass coated with titanium oxide



PICTURE 4: Composition 3 comprising particles of synthetic mica coated with titanium oxide



PICTURE 5 : Composition 4 comprising particles of glass coated with silver

